Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A base station transmitter in a CDMA system, comprising:

a base station modem for direct-spectrum spreading PCM data to I-channel and Q-channel CDMA signals;

a digital combiner for summing up the spectrum-spread CDMA signals by ~~sectors~~ channels into digital base-band CDMA signals;

a digital signal processor for converting the digital base-band CDMA signals into parallel signals with a first data rate and for outputting the parallel signals with a second data rate that is twice a data rate of the first data rate; and

an RF processor for converting the digital base-band CDMA signals outputted from the digital signal processor into analog RF CDMA signals.

2.   (Previously Presented) The base station transmitter in a CDMA system as claimed in claim 1, wherein the digital signal processor includes:

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first and second serial-to-parallel converters for converting the digital base-

band CDMA signals from the digital combiner into parallel signals;

first and second phase equalizers for compensating phases of the converted

parallel digital CDMA signals; and

first and second FIR filters for filtering the digital CDMA signals whose

phases were compensated with a predetermined sampling frequency to make the digital

CDMA signals have the second data rate.

3.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 2, wherein each of the first and second phase equalizers includes an IIR

(Infinite Impulse Response) filter.

4.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 1, wherein the RF processor includes:

first and second D/A converters for converting the CDMA signals from the

digital signal processor into analog CDMA signals;

first and second mixers for mixing the analog CDMA signals from the first

and second D/A converters with RF signals, to output RF CDMA signals; and

an adder for adding up the RF CDMA signals outputted from the first and

second mixers, to generate a QPSK-modulated CDMA signal.

5.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 4, wherein the RF processor further includes:

a band pass filter for removing spurious component from the QPSK-

modulated CDMA signal received from the adder; and

an amplifier for amplifying an output signal of the band pass filter and sending

the amplified signal to an antenna.

6.   (Currently Amended) A base station transmitter in a CDMA system, comprising:

a base station modem for direct-spectrum spreading PCM data to I-channel

and Q-channel CDMA signals;

a digital combiner for summing up the spectrum-spread CDMA signals by

~~sectors~~ channels into digital base-band CDMA signals;

a digital signal processor for ~~for~~ converting the digital base-band CDMA

signals into parallel signals with a first data rate and for outputting the parallel signals with a

second data rate that is twice a data rate of the first data rate; and

an RF processor for converting the digital base-band CDMA signals outputted

from the digital signal processor into analog RF CDMA signals,

wherein the digital signal processor includes first and second serial-to-parallel

converters for converting the digital CDMA signals from the digital combiner into parallel

signals,

first and second phase equalizers for compensating phases of the converted

parallel digital CDMA signals, and

first and second FIR filters for filtering the digital CDMA signals whose

phases were compensated with a predetermined sampling frequency to make the digital

CDMA signals have the second data rate.

7.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 6, wherein the each of the first and second phase equalizers includes an IIR

(Infinite Impulse Response) filter.

8.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 6, wherein the RF processor includes:

first and second D/A converters for converting the digital CDMA signals

from the digital signal processor into analog CDMA signals;

first and second mixers for mixing the analog CDMA signals from the first

and second D/A converters with RF signals, to output RF CDMA signals; and

an adder for adding up the RF CDMA signals from the first and second

mixers, to generate a QPSK-modulated CDMA signal.

9.   (Currently Amended) A base station transmitter in a CDMA system

comprising:

a base station modem for direct-spectrum spreading PCM data to I-channel

and Q-channel CDMA signals;

a digital combiner for summing up the spectrum-spread CDMA signals by

channels into the digital base-band CDMA signals;

a digital signal processor for converting digital base-band CDMA signals into

parallel signals with a first data rate and for outputting the parallel signals with a second data

rate that is twice a data rate of the first data rate; and

an RF processor for directly converting the digital base-band CDMA signals

outputted from the digital signal processor into analog RF CDMA signals without passing

the CDMA base-band signals through an IF conversion procedure.

10.   (Canceled)

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11.   (Currently Amended) The base station transmitter in a CDMA system as claimed in claim [[10]] 9, wherein the digital signal processing includes:

first and second phase equalizers for compensating phases of the converted parallel digital CDMA signals; and

first and second FIR filters for filtering the digital CDMA signals whose phases were compensated with a predetermined sampling frequency to make the digital CDMA signals have the second data rate.

12.   (Previously Presented) The base station transmitter in a CDMA system as claimed in claim 11, wherein each of the first and second phase equalizers includes an IIR (Infinite Impulse Response) filter.

13.   (Previously Presented) The base station transmitter in a CDMA system as claimed in claim 10, wherein the RF processor further includes:

first and second D/A converters for converting the CDMA signals from the digital signal processor into analog CDMA signals;

first and second mixers for mixing the analog CDMA signals from the first and second D/A converters with RF signals, to output RF CDMA signals; and

an adder for adding up the RF CDMA signals outputted from the first and

second mixers, to generate a QPSK-modulated CDMA signal.

14.   (Previously Presented) The base station transmitter in a CDMA system as

claimed in claim 13, wherein the RF processor further includes:

a band pass filter for removing spurious component for the QPSK-modulated

CDMA signal received from the adder; and

an amplifier for amplifying an output signal of the band-pass filter and sending

the amplified signal to an antenna.